

AMENDMENTS TO THE CLAIMS

1.-30. (Canceled)

31. (Currently Amended) In a signal processor for processing at least two measured signals M_1 and M_2 , where said signal M_1 comprises a physiological signal portion S_1 and may comprise a noise portion N_1 , and where said signal M_2 comprises a physiological signal portion S_2 and may comprise a noise portion N_2 , a method comprising:

determining a value for a coefficient c used in a combination of M_1 and M_2 such that the combination of M_1 and M_2 approximates S_1 , wherein determining the coefficient c comprises comparing frequency domain representations of the two measured signals M_1 and M_2 ;

using said coefficient c to remove at least some of the noise portion N_1 from the measured signal M_1 , thereby producing an approximation A_1 to said physiological signal S_1 ; and

determining a measured output value value for one or more physiological parameters based at least in part on said approximation A_1 .

32. (Previously Presented) The method of Claim 31, where A_1 , M_1 and M_2 comprise frequency domain signals.

33. (Previously Presented) The method of Claim 31, further comprising displaying A_1 on a display.

34. (Canceled)

35. (Currently Amended) The method of Claim [[34]] 31, wherein said physiological parameter comprises arterial oxygen saturation.

36. (Canceled)

37. (Previously Presented) The method of Claim 32, wherein S_1 is indicative of a heart plethysmograph, further comprising calculating a pulse rate of the heart.

38. (Previously Presented) The method of Claim 31, further comprising determining, based upon the comparison of M_1 and M_2 , whether M_1 comprises N_1 .

39. (Currently Amended) The method of Claim 38, ~~further comprising wherein said value for the coefficient c is selected to reduce its effect disabling said usage of e to remove at least some of the noise portion N₁ if M₁ does not comprise N₁.~~

40. (Previously Presented) The method of Claim 31, wherein the combination of M₁ and M₂ comprises a linear combination of M₁ and M₂.

41. (Previously Presented) The method of Claim 40, wherein the linear combination of M₁ and M₂ comprises $cM_1 - M_2$ such that $A_1 = cM_1 - M_2$.

42. (Previously Presented) The method of Claim 41, wherein an error value, e, given by the relation $e = S_1 - (cM_1 - M_2)$ is reduced.

43. (Previously Presented) The method of Claim 31, wherein comparing the two measured signals M₁ and M₂ comprises calculating ratios of values of a frequency domain representation of M₁ to corresponding values of a frequency domain representation of M₂.

44. (Previously Presented) The method of Claim 43, wherein said ratios are calculated using values that correspond to peaks in said frequency domain representations of M₁ and M₂.

45. (Currently Amended) The method of Claim 43, ~~wherein determining whether M₁ comprises N₁ comprises~~ further comprising determining whether the ratios have a predetermined degree of similarity.

46. (Currently Amended) The method of Claim 31, comprising displaying the measured output value value on a display.